Notice of Allowability	Application No.	Applicant(s)	
	10/089,012	MUHLEN ET AL.	
	Examiner	Art Unit	
	Vinit H. Patel	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *July 25, 2005*.

2. ☒ The allowed claim(s) is/are *1-20*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance: Methods for gasifying organic substances comprising feeding the organic containing materials into a pyrolysis reactor to produce a high caloric value gas by contacting the orgainic material to a heat carrier medium in the pyrolysis reactor to cause pyrolysis of the organic material to form a carbon residue and pyrolysis gas are generally well known in the art.

Applicant's invention is directed toward a method of gasifying organic substances comprising feeding the organic containing materials into a pyrolysis reactor to produce a high caloric value gas by contacting the orgainic material to a heat carrier medium in the pyrolysis reactor to cause pyrolysis of the organic material to form a carbon residue and pyrolysis gas; separating the heat carrying medium and feeding the carbon containing residue into a firing, the carbon containing residue heated in the firing and the heat carrier medium being heated by the gas formed from the firing where it is separated by the burning off of the coke; feeding at least a heat carrier medium to a reactor and feeding at least a portion of the pyrolysis gas into the reactor; wherein reactant is added to produce a product gas; and the heat carrier is recycled back into the pyrolysis reactor, wherein the pyrolysis reactor is designed to include a migrating fixed/moving or rotary drum) bed reactor, that converts the pyrolysis gas into product gas.

A search of the prior revealed Deglise et al., U.S. Patent No. 4,568,362, McIntosh et al., U.S. Patent No. 5,662,052, Velcich, U.S. Patent No. 5,262,577,

Rudolph et al., U.S. Patent No. 3,738,103. Haberman, U.S. Patent No. 4,038,100 and Gwyn et al, U.S. Patent No. 4,110,193, all of which teach alone or in combination methods for gasifying organic substances comprising feeding the organic containing materials into a pyrolysis reactor to produce a high caloric value gas by contacting the orgainic material to a heat carrier medium in the pyrolysis reactor to cause pyrolysis of the organic material to form a carbon residue and pyrolysis gas. However, the references alone or in combination fail to teach a method of gasifying organic substances wherein the steps include feeding the organic containing materials into a pyrolysis reactor to produce a high caloric value gas by contacting the orgainic material to a heat carrier medium in the pyrolysis reactor to cause pyrolysis of the organic material to form a carbon residue and pyrolysis gas; separating the heat carrying medium and feeding the carbon containing residue into a firing, the carbon containing residue heated in the firing and the heat carrier medium being heated by the gas formed from the firing where it is separated by the burning off of the coke; feeding at least a heat carrier medium to a reactor and feeding at least a portion of the pyrolysis gas into the reactor; wherein reactant is added to produce a product gas; and the heat carrier is recycled back into the pyrolysis reactor, wherein the pyrolysis reactor is designed to include a migrating fixed/moving or rotary drum) bed reactor, that converts the pyrolysis gas into product gas.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinit H. Patel whose telephone number is (571) 272-0856. The examiner can normally be reached on 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VHP

Glenn Caldarola
Primary Patent Examiner
Technology Center 1700